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The Sugar Insect—"Acarus Sacchari,"—found in Raw Sugar.

BY ROBERT NICCOL, GREENOCK, SCOTLAND.

The following extracts are from a pamphlet received a short time since. The revelations it makes, though not new to many, will, we apprehend, startle some of our readers. It extracts materially from the sweetness of raw sugar to think of its swarming with legions of disgusting insects.—EDS. OF FRIEND.

"Raw sugar should never be used for dietetic or domestic purposes; because it contains organic impurities; and more especially immense numbers of disgusting-looking insects, termed the "Sugar Insect"—found to be invariably present in raw or unrefined sugar. This insect is known by scientific men as the *Acarus Sacchari*; and when seen by the aid of a microscope, is found very much to resemble the sea-crab in its appearance.

No one, indeed, who has seen the filth and gross impurities extracted from the raw sugar at a refinery, could ever after use anything at the refined article. Pure sugar is, indeed, almost as desirable an article of food as pure water; and all should be anxious to substitute the refined for the raw material. Bad water and raw sugar abound in animalcules and vegetable impurities; but pure water and refined sugar are free from such. There are many grocers who sell raw sugar under the pretence that it is more economical to their customers than the refined article; and the latter parties (unaware of anything to the contrary) readily purchase the commodity under this impression. This is, however, a great mistake, which requires to be at once corrected. The best qualities of raw sugar do invariably contain very gross impurities; but the cheapest kind of refined sugar is perfectly pure and wholesome in every respect; and it can be obtained at the grocer's shop at as reasonable a price as the raw material—the refined article being invariably found to be genuine, in so far at least as its purity and wholesome qualities are concerned. This, let it be observed, is no mere haphazard assertion; for it is founded on fact: and the writer submits the following in proof of what he now states.

The following are extracts from a pamphlet on the subject by Professor Cameron, of Dublin:—

"In my capacity of public analyst for the city of Dublin, I have had occasion to examine, more or less minutely, nearly one hundred and fifty specimens of sugar, in quality varying from the purest white to the darkest brown. The greater number of these samples were perfectly genuine: some were of rather indifferent quality: and the rest—about fifteen—were so impure as to be quite unfit for use: they abounded in organic filth, and contained great numbers of disgusting insects. All the samples of very inferior sugar were of the kind known as raw; and in no instance did I detect in the refined article the slightest trace of any substance injurious to the health or repugnant to the feelings. With such facts as these before me, and writing in the interest of the consumer, I advocate the exclusive use of refined sugar. I unhesitatingly assert that no one who pays any attention to the purity of his food, aware of the nature of the impurities so frequently abounding in the raw article, could, without a feeling of loathing, make use of it."

"The insects found in sugar are Beetles and *Acari*, or mites. The beetles, which are more familiarly known to the sugar dealers than to the general public, may frequently be seen running nimbly along the tables in the sugar warehouses. The *Acari* are minute insects, and do not attract attention. There are several kinds of *Acari*: the cheese mite, the insect found in partially decomposed flour, and the minute parasite, which, by burrowing beneath the skin, produces the disease termed the itch—are all different varieties of *acari*. The mite found in raw sugar is termed the *Acarus sacchari*, or Sugar Insect.

"The *Acarus sacchari* is a formidably organized, exceedingly lively, and decidedly ugly, little animal. From its oval-shaped body, stretches forth a proboscis terminating in a kind of scissors, with which it seizes upon its food. Its organs of locomotion consist of eight legs, each jointed and furnished at its extremity with a hook. In the sugar its movements from one place to another are necessarily very slow, but when placed on a perfectly clean and dry surface it moves along with great rapidity. It has been stated that the *Acarus scabiei*, or itch insect, possesses the power of leaping, but all my attempts to induce the *Acarus sacchari* to make a jump failed, although it was placed in the most favorable positions for the performance of such a feat. By some authorities they are considered to be identical."

"The number of *Acari* found in raw sugar is sometimes exceedingly great, and in no instance is the article quite free from either the insects or their ova (eggs.) Dr. Hassall (who was the first to notice their general occurrence in the raw sugar sold in London,) found them in a living state in no fewer than 69 out of 72 samples. He did not detect them in a single specimen of refined sugar. The results of my examination of the sugar sold in Dublin

coincided pretty closely with Dr. Hassall's experience. In the refined sorts, I found nothing but crystalizable and non-crystalizable sugar, and a little saline matter; in the raw kinds, organic and mineral filth—often in great abundance. One of the samples which I examined, contained a larger number of insects than I believe had previously been noticed, or at least recorded, by any other observer. It was sent to me, together with other articles, in May last (1863,) by Horner, the master of the South Dublin Union Workhouse, and the following is the report which I made upon it: I have rarely examined a more inferior sample of sugar; it is extremely damp, contains a very large proportion of treacle, and a considerable amount of such impurities as sporules of a fungus, particles of cane, albumen, and starch granules. These substances, however, though greatly detracting from the value of the sugar, are not injurious to health. I cannot say as much for another impurity which exists in great abundance in this sample—namely, a species of *Acarus*, closely resembling in appearance and nature the insect which, by burrowing into the skin, produces the itch. It is no exaggeration to affirm that there cannot be less than 100,000 of these insects in every pound of this sugar. In ten grains weight, I estimated no fewer than 500, most of which were so large as to be distinctly visible to the naked eye. It is inconceivable that thousands of these creatures can be introduced into the stomach of a human being without serious endangerment to health. But not only is such sugar as this sample detrimental to health, it is also the least economical kind which can be employed. It greatly impairs the flavor of tea and coffee; and its high proportion of water and other useless ingredients lowers its sweetening power to an extent which even its low price fails to compensate for. Many persons believe that coarse brown sugar sweetens better, or, to use the common phrase, 'goes farther' than white sugar; but that is a mistake. A tea-spoonful of damp brown sugar will certainly sweeten a larger quantity of fluid than a spoonful of white sugar; but it does so because it is much heavier than the latter; but if equal weights be used it will be found that the white variety is by far the better sweetener. The kind of sugar which is both healthful and economical is the dry, large grained and light colored variety. If you cannot obtain such an article, you should purchase the lightest brown kind; and bear in mind that such sugar as I have examined for you is the most inimical to health, and the least value for your money which you could possibly get.

"The publication of the foregoing report in the newspapers excited considerable interest in the public mind; for, excepting a few scientific men, no one in Dublin appeared to have been previously aware of the existence of the *Acarus sacchari*. The assertion that one pound

weight of raw sugar contained a hundred thousand active insects, must, no doubt, have appeared incredible to some people; but that I was not guilty of exaggerating the number was proved by the results of subsequent examinations made by other observers."

"With the exception of the date sugar made in the East, every kind of raw sugar contains *Acari*. They are least numerous in the very damp, treacley kinds, because, as they are air-breathing animals, they cannot exist in treacle or water. If a spoonful of raw sugar be dissolved in a wine-glass full of water, the animalcules will speedily come to the surface, from which they may be skimmed off and transferred to the object-glass of the microscope. On the surface of the water they appear as white specks, and as they swim about vigorously, their movements are quite apparent to the naked eye.

"The *Acari sacchari* do not occur in refined sugar of any quality for the following reasons:—Firstly, because they cannot pass through the charcoal filters of the refinery; secondly, because refined sugar does not contain any nitrogenous substance (such as albumen) upon which they could feed—and I have already shown that even the most insignificant animals cannot subsist solely upon sugar, or upon any other kind of food destitute of nitrogen. The only impurity found, and that rarely, in refined sugar, is a trace of iron; its origin is easily explained."

For "The Friend."

Sketches from the Memoranda of our late Friend Christopher Healy.

(Continued from page 138.)

The subjoined letter from his friend J. Edgerton, was received by C. H. the following year (1841.)

"Near Barnesville, Belmont Co., Ohio,
Fourth mo. 4th, 1841.

"Dear Friend Christopher Healy.—In near and dear affection I address thee, and may acknowledge the receipt of thy very acceptable letter of the 12th mo. last, which was instructive; and I can heartily respond to what thou writes, that the members of the spiritual house rejoice to hear of each other's walking in the Truth: for however widely they may be scattered over the earth, they are brought nigh in the covenant of life, and partake together not only of the afflictions of the gospel, which the living members of the body of Christ have to experience, but also those consolations which are at his right hand. I doubt not that the living, faithful followers of the Lamb in every part of the heritage, travail for the welfare of Zion, and the enlargement of her borders; and, notwithstanding many discouragements at times appear, as they keep inward and fervent in spirit, these will be favored to know what their place and duty are, whether in silent exercise and prayer, or to be more actively engaged in this great cause. And we have the best authority for believing that such a state of mental breathing unto Him, who is Head over all things unto His church, will not fail of a due regard.

"I may inform in regard to the subject of books, that the nomination to whom it was referred have given attention to the subject, and are to meet again in Fifth month, at the time of Short Creek Quarter. I continue to consider it to be a matter of great importance to the welfare of our religious Society; and I much desire that we may be divinely directed

therein. As far as I am capable of judging, the views of our members are about as when thou wast with us. It does appear to me to be a liberty that any Meeting for Sufferings has, to take notice of anything that appears written by one of our members, and purporting to be the doctrines of the Society: and at the same time entertaining sentiments at variance therewith. The writings of J. J. G. evidently contain non-quaker principles. And if the Society yields to them, it will gradually fall back again to that which our forefathers were gathered out of. These things do occasion much exercise to the living in Israel; and O! saith my soul, may these, wherever they are, dwell in the power of an endless life; looking steadily unto the blessed Helper of his people, that they may, from time to time, witness him to be unto them all that they stand in need of—'Wisdom, righteousness, sanctification, and redemption.' And I doubt not but that as we are faithful, the Lord will work for his own eternal Name's sake, and for his cause sake, as well as for his people; making bare his holy Arm in the sight of many, and causing these clouds to pass over, and the dawn of a brighter day to appear; wherein children yet unborn shall praise the name of that God who first gathered us to be a people, and by his powerful visitation to our forefathers, enabled them to hold up a pure and perfect standard of christian doctrine, in accordance with the Holy Scriptures. I feel much for my dear friends in various parts, who are deeply tried, and at times may be ready to cry out, 'The Lord hath forsaken me, and my Lord hath forgotten me.' The subsequent language may, through divine mercy be sweetly applied: 'Can a woman forget her sucking child, that she should not have compassion on her son? yea, they may forget, yet will I not forget thee. Behold I have graven thee upon the palms of my hands; thy walls are continually before me.' My faith is at this time unshaken in the Arm of Israel's God, that was so wonderfully manifest in the gathering together of this people: as well as, from age to age, to raise up and preserve a remnant upon the same eternal Foundation. And having brought us thus far, He will not leave nor forsake. 'For the mountains shall depart, and the hills be removed; but my kindness shall not depart from thee, neither shall the covenant of my peace be removed, saith the Lord that hath mercy on thee.'

"Our dear friend, William Kennard, has been set at liberty to visit most of the meetings of New York, and some of the meetings of your Yearly Meeting. He expects to set out about the first of the Fifth month, and take the northern route by Michigan.

"I was at the close of the winter session of our Boarding School, last Fourth-day, to my satisfaction; evidence being given of the Divine blessing resting upon the honest labors of Friends.

"Our 'Meeting for Sufferings' when last met, thought it right to prepare a short Address to the President of the United States; feelingly laying before him the situation of the aborigines of this country, as well as the descendants of Africa.

"I conclude; my dear wife uniting with me in love to thee, and thy dear wife and children; and remain, in the fellowship of the Gospel, thy friend,

JOSEPH EDGERTON."

Christopher Healy, though not a member of our Society by birth, seems to have been scrupulously careful to maintain, from early introduction into it, what are called the minor testimonies of the Society of Friends. Faithfulness in the day of small things, and in that which is a cross to our natural, mortified wills, is the secret of growth, in obedience which is of faith, unto a wise and strong man in Christ Jesus. Would that pure mind might be stirred up in all who are delinquent in this respect; and that, daring to do right, despite the dreaded finger of scorn, such might keep to the simple language of scripture, and to that testimony against the corruptions and ways of the world, which our early Friends purchased for us at the cost of much contumely and suffering. Our dear friend believed the testimony of plainness of speech, to be no cunningly devised fable; and hence was engaged to keep it in the measure of wisdom; and the Lord—who looks on the heart, and who in speaking of "weightier matters" in connection with the smaller "tithes" of our obedience, said, "These ought ye to have done, and not have left the other undone,"—honored him in the eyes of all, even the great of the earth.

This is substantiated by the following narrative:—"At the Quarterly Meeting of Haddonfield, Christopher Healy said, in substance that he did not know why it was, but a circumstance that had occurred many years ago had been brought to his remembrance, perhaps for the benefit of some one present. There was a man in the neighborhood where he then resided, high in civil station, who even some members of our Society addressed with titles of honor [probably his honor, his excellency]. With this man Christopher said his brother had some business to transact connected with his high station, and desired an introduction from Christopher to him. They proceeded towards the residence of this great man, a deep concern came upon Christopher's spirit that he might not be found shrinking from the testimonies of Truth, as the language powerfully arose in his mind, 'Whosoever shall deny me before men, he will I also deny before my Father which is in heaven.' When he entered the presence of the visited, the salutation which he uttered was on this wise, 'Elias, how art thou?' (his name was Elias Potter.) They were kindly received and the business attended to. Some time after, this man of note told Christopher's brother, 'Some of your people balk their testimonies by giving titles of honor, but you brother Christopher is not one of these.' In process of time, Christopher continued, I had a meeting appointed there, and Elias Potter did what he could to further it, and came, and behaved very solidly. He then added some pertinent observations upon Friends and their associations with others *standing plain and upright* for the Truth. His lively way of narrating the circumstance, writes the Friend to whom C. H. afterwards communicated, made it deeply interesting; and doubtless entered somewhere between the joints of the marrow of those in the Quarterly Meeting for whom it was designed."

The following allusion of Christopher Healy to incidents in his early life, may well cause those who are poor in this world, to be encouraged to look unto the Lord, and to seek His favor and direction by a life of faith, rather than to repine at the situation or

cumstances in which they are placed: knowing that no human reasonings or contrivings, without His blessing, will avail us: but that "godliness with contentment," is the great gain. It may likewise show us that it is not always the rich, the wise, nor the learned, who are honored of their Lord, or are called to be the messengers of His gospel of life and salvation: but that God still chooseth the weak things of the world, the poor, and the foolish in their own eyes to confound the wise, and to prove that no flesh need or can glory in His presence. It discloses to us also that faithfulness, in the special providence of the great Lord of all, has its reward very often in this life, who regardeth the sparrow, and numbereth the hairs of our heads. It extends a caution to us too not to deride those who move in an humble sphere, and to the outward eye far beneath ourselves; and yet whose humble walking, with their fewer cares and more close attention to the restrictions of Divine grace, may make them of the "last that shall be first." And lastly it may teach us, that those who earn their temporal living by the sweat of their brow, so far from being less favored of Him, who himself on this earth had not where to lay his head, are, on the contrary perhaps, the more often those whom he condescends to help, and bless, and crown with his choicest spiritual gifts. May all who read C. H.'s account be encouraged to seek the Lord with their whole hearts, and to trust alone in Him; who, while he never saith to His wrestling seed seek ye my face in vain, is at the same time the God of all grace and comfort, the ever-present Helper in every time of trouble, the Physician of value in every malady of the soul, the Sufficiency in every trial, the Anointing, the Comforter and heavenly Guide unto all that is rich, and sure, and everlasting, in the kingdom of never-ending joy.

C. H. had been speaking of a Friend, poor as to this world, in whom he felt much interested, and who had lately, in the usual course, been acknowledged a minister in our Society; when he thus continues: "As poor as — may be, if he will but keep his place, keep low, and look to the Master, I have no fear for him. The good Master will make a way for him. Haven't I abundant cause to bless his holy name? Was there ever a poorer Quaker than I was? And hasn't the Lord cared for me through many long years, and hasn't He now fixed me in my old age in as comfortable a situation as my heart can wish? Why yes! I have a comfortable home at which I can welcome and entertain all my friends. Ah! this was the height of my worldly ambition, that I should be able to accommodate my friends; and the Lord has fulfilled the desire of my heart. In my first wife's time I had hard work to keep my head above water; but the Lord strengthened me. My wife was very weakly, and at least half her time so sick she couldn't help: so that with doctor's bills and other expenses, I had to struggle with many difficulties, having no other way to earn a living but by going out at day's works. Many a time after working hard all day at hoeing corn, or other farm labor, I have received my half bushel of corn for my day's work, (for the farmers didn't pay us in money,) and then after sundown had to carry it on my back a mile or more to mill to get it ground. So I couldn't get it home until long after I ought to have been in bed and asleep,

to prepare me for another day's hard work. I remember that at one time my doctor's bill was so large, that I had to hire myself out for eighteen months to get money enough to pay it. This reminds me of a circumstance which shows how poor and weak I was, and how easily I was discouraged. I was indeed both outside and in, one of the poorest Quakers that ever was: at least I thought so. My eighteen months was out at Quarterly Meeting time, and my father-in-law brought my wife and two of my children down to the Quarterly Meeting to meet me. When we were going home, father took my wife behind him on horseback, and carried one of my children in his arms, while my wife carried the other in her lap. Of course I had to go afoot, and I had to carry my clothes and some other little matters. We were thirty miles from home. Still I didn't mind the distance, but there was one of the bundles which I couldn't contrive to carry on my back; it wouldn't stay fixed: so I spoke to a Friend in company, who was one of the overseers of our meeting, and who had a good strong horse under him and no baggage, to know if he wouldn't let me tie that little bundle behind his saddle, telling him I did not like to be a trouble or burden to my friends, but I did not see how I could get it along myself. He looked anything but encouraging and said, 'If this was all the trouble and burden thee was giving Friends, we could more easily put up with it.' Well, I was poor enough in spirit before, but this overset me. I had been bleating out a few words in meeting for some time, and now I thought surely it is all over with me. But the Lord who knew the sincerity of my heart did not suffer me to perish, but hath preserved me, and blessed me even unto this day. That rich overseer came to poverty, and made a bad end; but the Lord has watched over me for good, given me my life for a prey, and bid me live. It is wonderful how little money we can get along with. When I had concluded to move into New York State, we gathered together all the little property we had in the world, and started. We had a wagon and that was paid for, and in it there was my wife and six children, and all the rest of our worldly goods. We had a horse but it wasn't paid for, and when we landed on the west side of the North river, I had just one piece of money left, and that was a half dollar. But I soon got into a school and began to earn something; and am preserved unto this day to praise the Lord, and to tell of his wondrous works, and of his goodness to the children of men."

These remarks of Christopher, writes the Friend who heard and who penned this account, are very striking in themselves, but they had an additional force to those who heard them, from the animation of manner, and lively energy in the delivery. He sat and rocked on his chair as he spoke, and at times his voice would mellow away to a solemn melody, especially when he was speaking of the Lord's mercies to him. A feeling of thankfulness seemed very much the constant clothing of his mind, and he loved to tell others of the riches of the mercy and providential care of the Lord Jesus, towards and over his dependent little ones. A very short time before he was taken sick with his last illness, coming to his own home, perhaps after a chilly ride, and finding everything comfortably prepared for him in his little sitting room, and a good fire blazing on the hearth, he sat down

and seemed overcome by the thankful emotions of his heart. He could not forbear to speak of the Lord's mercies to him, of the promise made him in early life of future earthly blessings, if he would be faithful, and of the sweet fulfilment he then experienced.

(To be continued.)

Bees and their Habits.

It has long been known that a certain solitary wasp in Europe (*Odynerus parietum*, Linnaeus,) that bores holes in the clay mortar of walls wherein to construct its nest, employs the excavated particles in attaching a temporary tube of tempered earth to the exterior of each hole. Through this tube it passes and repasses during the progress of the work, pulling it to pieces when the work is completed, and using the materials of which it is composed in stopping up the mouth of its hole, after the fashion customary with digger-wasps. I discovered at Dr. Hull's place [near Alton, Illinois,] that a species of solitary Mason bee (*Anthophora sponso*, Smith,) which greatly resembles a small Humble-bee, has the same singular habit, its tube being constructed of tempered clay, and being about two inches long and three quarters of an inch in diameter. The way I came to make this interesting discovery was as follows: Dr. Hull, being addicted to new inventions for raising early vegetables upon the most gigantic scale, had constructed early in the season a vast system of underground flues, for warming up the earth on the entire side of a hill, wherein to grow early tomatoes. Going with him to view the mouths of the flues, which all of them opened out at the bottom of the hill, and were constructed of bricks laid up, not with lime mortar, but tempered clay, I observed many clay tubes projecting from the joints of the brick work. I had not looked at them long, before one of these Mason bees flew into one of the tubes, and disappeared in the hole it had constructed between the bricks. Watching my opportunity, as a second and a third bee performed the same process, I seized them, tube and all, in my pocket handkerchief, and soon had them safely pinned in my collecting-box. Having many years ago taken plenty of the same species in Central Illinois (where, however, they bored their holes, not in brick-work, but in the face of a precipitous clay bank, and where, by the way, I had not observed them to construct any clay tubes), I was not anxious to capture additional specimens of the insect itself, but contented myself with securing two perfect and unbroken specimens of their curious masonry.

As in the case of all nest-building solitary bees, including the Carpenter bees, the Mason bee, after she has constructed her nest, provisions it with a sufficient supply of honey and pollen, and then having laid an egg thereon, closes the nest up. On the other hand, all the solitary wasps provision their nests, not with honey and pollen, but with one or more living insects; as is done by the gigantic digger wasp that preys on locusts, and by the common mud wasp. In both groups of insects, the young larva that hatches out from the egg attains maturity within the nest, feeding exclusively upon the stores of food laid up for it with such provident care by its mother; and in the following year it comes forth a perfect bee or a perfect wasp, belonging to the same species as the mother that produced it.

It may be added that, of all the species of Mason bees found in the old world, but a single one (*Anthophora parietina*, Latreille) is recorded by authors as building these singular clay tubes at the mouth of its hole; while, in addition to the species mentioned above, a second North American species (*Anthophora taurea*, Say) has been described by our great Pennsylvanian entomologist, Thomas Say, as practising this remarkable style of architecture. European authors have observed the fact, that both their tube-building Mason bee and their tube-building Mason wasp moisten from their mouths the earth wherein they propose to excavate a hole, and then working up the moistened matter into a pellet, proceed to employ it in the construction of the tube. In every case, the exterior of the tube is always rough and uneven, so that the eye can distinguish at once where each pellet has been stuck on to that which precedes it: but the interior is sufficiently smoothed for the convenient passage of the bee or wasp. As is almost universally the case with insects, it is only the female Mason bee that labors.

The curious reader may perhaps inquire: "Of what possible use can this clay tube be to the female Mason bee, constructed as it is with great pains and art upon one day, only to be torn to pieces and used in filling up the hole upon the next day?" The answer is obvious enough to every entomologist. There are hosts of insects, some of them beetles (*Clerus* family), some of them four-winged flies (*Ichneumon* and *Chrysis* families), which are parasitic upon the larva of the Mason bee, and are always lying in wait to enter its nest and deposit an egg therein. When once this is effected, the future larva of the poor Mason bee is doomed. It will hatch out and attain a certain size, but then, alas! the ferocious parasite is disclosed from its egg, and seizing upon the soft and helpless larva, gradually and slowly eats out its vitals. There is also a small group of solitary bees, which not being themselves provided by nature with the organs proper for collecting pollen, sneak into the nests of pollen-collecting bees, and lay their eggs upon the pollen stored up therein by the industrious builder of the nest, thus appropriating to their own future offspring the food that had been prepared with great labor for the offspring of another. These last may be conveniently called "Guest bees," though by some authors they have been somewhat ambiguously denominated "Cuckoo bees." What is a very curious fact, to every genus of "Guest bees," there is assigned one or more peculiar genera of pollen-collecting bees for its prey; and the unfortunate Mason bees, of which we have been talking, are not left without an appropriate genus of unbidden Guests, to enter their houses on the sly, and take the meat out of the mouths of their future offspring. Hence, with all these enemies lying in wait for it, the particular species of Mason bee, whose biography we are discussing, has been taught by a wise Providence to baffle those enemies, to a very considerable extent, by constructing a kind of blind passage way into its house; and this passage way it leaves untouched, as long as it is obliged by circumstances to keep its entrance hall wide open, but so soon as it is able permanently to close up the entrance hall, it pulls the passage way down, and uses the material for blocking up the door way. Could human intelligence go any further? And yet many

otherwise well educated people believe firmly, that "bugs," as they are pleased to call them, have no more sense than so many stocks and stones!—*American Entomologist*.

THE HARVEST HYMN.

Selected.

God of the rolling year! to Thee
Our songs shall rise—whose beauty pours
In many a goodly gift, with free
And liberal hand our autumn store;
No firstlings of our stock we slay,
No soaring clouds of incense rise—
But on thy hallowed shrine we lay,
Our grateful hearts in sacrifice.

Borne on thy breath, the lap of Spring
Was heaped with many a blooming flower;
And smiling Summer joyed to bring
The sunshine and the gentle shower,
And Autumn's rich luxuriance now,
The ripening seed—the bursting shell,
The golden sheaf, and laden bough,
The fulness of thy bounty tell.

No menial throng, in princely doom,
Here wait a titled lord's behest,
But many a fair and peaceful home
Hath won thy peaceful dove a guest;
No groves or palm our fields adorn—
No myrtle shades or orange bowers—
But rustling meads of golden corn,
And fields of waving grain are ours.

Safe is thy care the landscape o'er,
Our flocks and herds securely stray;
No tyrant master claims our store—
No ruthless robber rends away,
No fierce volcano's withering shower—
No fell simoon with poisonous breath—
No burning suns, with baleful power,
Awake the fiery plagues of death.

And here shall rise our song to Thee,
Where lengthened vales and pasture lie,
And streams go singing wild and free,
Beneath a blue and smiling sky,
Where ne'er was reared a mortal throne,
Where crowned oppressors never trod,
Here—at the throne of heaven alone,
Shall man in reverence bow to God.

PRAISE.

Selected.

"Oh Lord, I know that in very faithfulness thou hast afflicted me."

For what shall I praise Thee, my God and my King!
For what blessings the tribute of gratitude bring?
Shall I praise Thee for pleasure, for health, or for ease?
For the spring of delight, or the sunshine of peace?

Shall I praise Thee for flowers that bloomed on my breast,

For joys in perspective, or pleasures possessed?
For the spirit that heightened my days of delight,
And the slumbers that sat on my pillow by night?

For this should I praise Thee; but if only for this,
I should leave half untold the donation of bliss.
I should thank Thee for sorrow, for sickness, for care;
For the thorns I have gathered, the anguish I bear.

For nights of anxiety, watching, and tears,
A present of pain, a perspective of fears,
I praise Thee, I bless Thee, my King and my God,
For the good and the evil thy hand hath bestowed.

The flowers were sweet, but their fragrance is flown;
They yielded no fruit, they are withered and gone;
The thorn, it was poignant, but precious to me:
'T was the message of mercy—it led me to Thee.

Selected.

In the ten years of childhood I enjoyed the tender care of pious parents, whose unremitting endeavour it was to train up their children in the nurture and admonition of the Lord, to introduce them early to an acquaintance with the Holy Scriptures, and by wise and judicious culture, to prepare the soil of the heart for the operations of the heavenly Husbandman. Being of a high spirit and

volatile temper, my disposition, rendered strait as needful as it was irksome, and often brought my tenderly affectionate parents in deep anxiety on my account. Many and fervent were their prayers, I doubt not, that I might be brought under the regulating influence of the Holy Spirit, and be led to see the beauty of the truth as it is in Jesus; and that their petitions, I have often since considered as the richest inheritance they could bequeath to their children. Very early was my heart made sensible of the love of God, and strong desires were at times raised in my soul to become one of his children. But, notwithstanding these good impressions, and my love of the Holy Scriptures, which I read much with great delight, the next ten years were for the most part, years of inconsideration and levity. In the course of them, we were deprived of our excellent mother, whose example was peculiarly instructive, and her counsels prudent, judicious and affectionate. My thoughts often recur with bitter anguish, the few years which immediately followed her death, when I might have afforded much solace to my tender and deeply sorrowing father, had but my heart been duly subjected to the restraining power of the cross of Christ: and oh! what cause have I to acknowledge the preventing grace which saved my feet from the path of destruction, at a time when my own folly and inconsideration would have made me an easy prey of our soul's enemies; then, perhaps, were those prayers of my beloved parents, which had for so many years been offered up, permitted to descend on the unworthy child, in the blessing of that God who heareth an answering prayer, and who in his tender mercy was pleased to follow us with the reproofs of instruction.—*Maria F.*

Cream in Winter.—Keep where moderate warm, and add to each milking, or once a day a little hot milk. Heat the milk till almost to the boiling point; heat it fresh from the cow. The quantity is about a pint to a painful each milking. The effect of this is to prevent the cream from turning bitter; the buttermilk will be as sweet and fresh as in summer, and the butter, in consequence, will be better than without this treatment. We have this from an old experienced dairyman, who has practised it for many years, and we are personally aware of the excellence of the practice. It is a point that should be known, for there is much bad butter made in winter, and buttermilk unfit to use.—*Vermont Farmer*.

Selected.

As he lay in a weak condition, he was often opening his mind to divers of his friends; particularly when several ministering Friends came to see him, he spoke to this effect.

I have loved the brotherhood, I have sought the unity and peace of the church for thirty-four years; and to my great comfort, never did anything tending to the breach thereof. I have two things that lie upon me to Friends which I desire may be communicated to thee. The first is, that they gather down to the immortal Seed and Word of life in themselves, and be exercised before the Lord, and duly prize and set a right value upon the manifold outward and inward mercies, and blessings and heavenly visitations, that the Lord has eminently bestowed upon them, since the morning of the day of his blessed visitation; then shall they grow and be preserved in

iving freshness; and the Lord will continue his mercies to them; they shall not want his livine, refreshing presence in their meeting together before Him.

The second thing is, that those Friends that the Lord hath given great estates unto, ought to cast their bread upon the waters, and do good therewith in their life-time; for those, that are enjoyers of such things, should see that they are good stewards thereof. Oh, the many poor families that such persons might be a help to! How easily might they, with a little, assist many a family to live in the world! And what a comfort it would be to such to see the fruits of their charity in their life time.—*Account of Charles Marshall.*

Draining Lakes.—In Holland there is an instance where an area of 40,000 acres of water, was turned into as many acres of productive land. The Haarlem Lake was 40 miles in circumference, and not only rendered useless the land which it covered, but even threatened to overcome the dykes and submerge the surrounding country. In 1840 the State General of Holland conceived the plan of pumping the lake entirely dry by means of immense engines. A double dyke or canal was first formed, by which the water was pumped into higher streams, and then by means of other engines finally discharged into the sea. The average depth of the lake below the level of the water courses leading to the sea was about 13 feet, while the amount of water to be discharged reached more than 1,000,000 of tons. In 1853, after four years of continued labor, the bed was made dry, and rendered fit for tillage or pasture land. During the two following years more than 40,000 acres were sold at an average price of \$90 per acre. It now has a population of 80,000, with houses and villages, and orchards, while the bed is kept dry by means of three enormous engines, at an annual cost of about seventy-five cents per acre. There is a canal extending through the bed of the lake which drains the land about a foot and a half below the general level, and whenever the water accumulates, the engines again commence operation. These engines are under control of the proprietors of the land, and a director is chosen from their number, who assumes charge of their management. One day of labor in the week answers the purpose of keeping the bed dry, and the water, after reaching the sea, is so much below the level there, that it must be again pumped into the ocean as from the hold of a vessel. The dykes which line the coast are the bulwarks of Holland. It was only by means of cutting them that these sturdy old covers of liberty, under the direction of the Prince of Orange, were enabled to submerge the entire country and thus assert their independence of Spanish tyranny.—*Late Paper.*

He that prefers anything that is outward and temporal before God, prefers the creature before the Creator, and makes that to be his God which is not God. We will by no means endure the reproach of being idolaters, though indeed we are so, no less than others were of old. At this very day, many in christendom worship gold, silver, wood, and the goods of this world. He who loves God serves Him, but he who does not love Him, neither doth he can serve him, however great works of devotion he may outwardly perform.

Selected for "The Friend."

A Testimony from Middleton Monthly Meeting, Ohio, concerning John Heald.

This, our dear friend, was born in Loudon County, Virginia, 5th of Ninth month, 1763; and being early favored with the heavenly visitation, he became acquainted with the discipline of the cross, and was united to the Society of Friends about the time he arrived to manhood. It appears that he at times strove against conviction; yet learning obedience by the things he suffered, he became distinguished for his upright walking and care in supporting our various christian testimonies; and by a careful indwelling with the Divine gift, his heart was enlarged in love to God, and good will to man.

About the 27th year of his age he yielded to an impression of duty which had cost him much exercise, and became a public advocate for the cause of his dear Lord and Master; and being careful not to go before his guide, he appeared mostly in a few words, and not very frequently, for several years. And as he increased in his gift and in experience, he was acknowledged a minister by this Monthly Meeting about the year 1803, (he having previously removed to this neighborhood.) About this time he states that it was clearly opened to his mind that he had but little more to do with the affairs of this life; upon reflection it did not appear to him that he was about to leave the world; but that he must be at the Divine disposal. Pursuant to the admonition he became much disengaged from worldly concerns, and dedicated to the service of our Holy Redeemer. He visited nearly all the meetings of Friends on this continent, and many of them several times; frequently appointing meetings from amongst Friends, and we have reason to believe that his labors in the Gospel were serviceable where his lot was cast. He was also at various times engaged in the important work of visiting families, for which he was qualified. Being of a cheerful disposition, and susceptible of the tender sympathies of friendship under the sanctifying influence of Divine Grace, his company and conversation were edifying. He encouraged both by example and precept, the daily reading of the Holy Scriptures, and though charity and christian forbearance were conspicuous traits in his character, he promoted the due exercise of our discipline, without partiality or unnecessary delay.

In the year 1829 he was visited with sore affliction of body, which in his own apprehension, and that of others, appeared likely soon to remove him from this state of being. But being strengthened with might by the Spirit in the inner man, he spoke to the states of many who came to see him.

And while thus apparently on the verge of time, the great and glorious plan of christian redemption was often his theme; and he thus declared his belief: "I believe in the Lord Jesus Christ, in all his offices, who was conceived by the Holy Ghost, born of the Virgin Mary, suffered death under Pontius Pilate without the gates of Jerusalem, for the sins of the whole world, and rose again the third day for our justification; and now my hope of salvation is in him alone; that through his merits and mediation with the Father I shall be accepted." Deeply imbued with a sense that the ability, both to will and to do with acceptance, was the gift of God through Jesus Christ, he ascribed all to him, acknowledging

he was an unprofitable servant—adding, "I believe at this awful moment, that nothing but his mercy will save me." At another time he said: "I have confessed the Lord Jesus Christ before men, and I trust he will not deny me before his Father and the holy angels. I believe my sins are gone beforehand to judgment; there is to me no condemnation, and death has no terrors." Some days after, he supplicated nearly as follows: "O! adorable Majesty, I am unworthy of the least of thy favors and mercies, but I implore thee, that I may know thee, the only true God, and Jesus Christ, whom thou hast sent. If thou seest fit to diminish my present portion of earthly comfort, or to increase them, to give me many or few days, all are in thy hand, who knowest what is best for me, and let thy holy will be done; but, O! for thy mercies' sake, enable me to know and do thy blessed will, all the days thou shalt see meet to allot me here." From this time till the beginning of the year 1841, he was so much recovered as to be mostly able to attend his own meeting, continuing to evince that christian concern which through life had rendered him exemplary in the performance of this great duty, and careful to assemble in season; often presenting himself when under great bodily weakness and sufferings, and sometimes enduring much pain in sitting a meeting; he was frequently and acceptably engaged in testimony.

Knowing well the value of unity in the Church, he labored much to promote that charity which thinketh no evil; and nearly the last public testimony he bore amongst us, was to show that evil surmising is incompatible with the love of our Father in Heaven; that if we love God, we must love our brother also. Being afflicted with a very painful disease, and some Friends coming to see him he said: "I have nearly finished my course, I have fought the good fight, and kept the faith, henceforth there is laid up for me a crown of righteousness which the Lord, the righteous judge, shall give me at that day." He said he freely forgave all who had said or done any thing against him, and desired it might not be laid to their charge; and he hoped those who thought he had injured them would forgive him, for he had nothing in his heart but love for all mankind." A few days previous to his decease, he appeared peaceful, said that he was an unprofitable servant, that he had done no more than his duty, adding: "It is not by works of righteousness that I have done, but through mercy,—all of His mercy, if I am saved, which I hope and trust will be my happy experience, and that He will not leave me, nor forsake me in the last conflict." Difficulty of breathing prevented his lying in bed; and his mental faculties in some degree sympathized with his bodily infirmities, so that he could not always convey his ideas in correct terms; but he frequently commemorated the triumphs of redeeming Grace; saying, "The Redeemed of the Lord shall come to Zion with songs and everlasting joy upon their heads." His sufferings at times were exceedingly great, until near the close, but he appeared to be favored with the spirit of supplication and praise as long as he could speak; and then seemed to fall into an easy slumber; drew his breath shorter and shorter, until he ceased to breathe on the 26th of the Fifth month, 1841, in the 78th year of his age; and we have the com-

fortable belief that he has entered into that rest which is prepared for the just of all generations.

Land slide in Maine. Curious Natural Phenomenon.—The people in the village of Cumberland Mills and vicinity, which is about five miles from Portland, were startled about 5 o'clock in the morning, by a rumbling noise and jarring of the earth, which they supposed to be an earthquake. Investigation, however, disclosed an immense landslide on the north bank of the Presumpscot river, about one-third of a mile below Cumberland Mills. The land sunk extends back from the river nearly half a mile in an oblong shape, and is some forty rods in width, embracing at least thirty acres. It fell from thirty to fifty feet, and the river was dammed up for more than an eighth of a mile.

The land which sunk was for ten feet from the surface a light sandy loam, and below that, blue clay. There was a light growth of scattering wood on the greater portion, and most of the trees are left standing erect, or very nearly so, notwithstanding their drop.

The result of the damming up of the river overflowed about forty-four acres of Samuel Raymond's interval land on the opposite side, damaging his property from \$12,000 to \$15,000. The water continued to back up and overflow adjacent lands. The Cumberland paper mills were flooded to the first windows on the lower floor, entirely submerging all in the lower part of the mill, including of course the valuable machinery in the basement. Operations at the mills will necessarily be suspended for a time, and three hundred operatives will be thrown out of employment.

It was apparent that the convulsion was not occasioned by the undermining of the river. The sinking evidently commenced some distance away from that, and the bed of the river was pressed upward to the level of the surrounding land. An intelligent gentleman, who carefully examined the scene, theorizes that the long-continued wet weather had softened the substratum of clay until it would not sustain the weight above. An occupied dwelling house narrowly escaped destruction, the slide extending to within twenty rods of it. The water in the section overflowed, apparently ceased to rise about 5 o'clock in the afternoon, and no damage was apprehended by the rise of water above the upper dam at Cumberland Mills.

It is difficult to approximate the amount of damage inflicted, but it cannot, it was thought, fall short of \$100,000. The course of the river will be permanently changed.

The affair is not entirely without precedent in this vicinity. Some fifteen years ago about twenty acres sunk in a similar way a few miles from the scene of the present disaster. In that case, however, the damage was only to the land involved.

The effect of the convulsion upon the river may be imagined from the fact that fish of various kinds, pickerel, trout, smelts, &c., were picked up in large quantities on the adjacent lands. The sudden receding of the water, after the overflow caused by the first crush, left the finny tribe high and dry on terra firma.—*Portland Argus.*

Without the trial comes not victory, nor without the cross the crown immortal, that fadeth not away.

The Open Polar Sea.

Notwithstanding the doubts entertained of the practical value of the North Polar expeditions, they still continue not only to engage the attention of geographers, and to attract the adventurous, but also have a strong hold on the popular interest. Notice was taken in these columns, nearly a year ago, of a proposed French expedition to the North Pole, under the command of Captain Gustave Lambert. The subject is discussed very clearly in an article in the *Revue des Deux Mondes*, an English translation of which is given in *Littell's Living Age*. After referring to the numerous attempts which have been made to reach the Poles, the writer in the *Revue* proceeds to argue in favor of the existence of an open North Polar Sea, while showing, at the same time, that the regions around and adjoining the South Pole are ice-bound, and part of it probably continental, or consisting of an extensive range of land. Lambert, it will be remembered, proposes to take a route different from that of Franklin, Dr. Kane, Ross, or any preceding Arctic navigators, except Cook. Crossing Behring's Straits in the month of July, at the great breaking up of the ice in the Polar regions, he would double on the west Cape Serdze, and the North Cape of Cook, to enter among the floating ice, penetrate into the Polynia, or free sea, and thence sail towards the Pole. The feasibility of this project is based on considerations of two kinds. First, A series of facts, ascertained by observation or deduced from theory, lead to the opinion that the mean temperature, instead of falling in a continuous manner to the Pole, is, on the contrary, higher there than beneath the Polar circle, that is to say, about 67 degrees north latitude. The explorer might there expect to meet a free sea surrounded by a barrier of ice, which would be completely closed only during the colder months of the winter. In the second place, the polar currents and the ice which they drift, confirm in a striking manner the hypothesis of a vast open sea rolling its waves around the North Pole. In addition to the reports by Dr. Kane and those of Morton and Dr. Hayes, who claim to have observed an open sea north of Smith's Straits, we have the accounts of Hedenstroem, Wrangel, and Anjou, who have seen an immense sheet of free water to the north of Siberia, in fact a polar sea.

It has long been known that the isothermal lines, or lines of equal temperature on the earth's surface, do not correspond with the degrees of latitude or distance from the equator. The Poles or points at which terminates the axis of rotation of the earth, are not from these premises necessarily the coldest points. D. Brewster concluded from the direction of the isothermal lines, that there existed two polar points of cold, the one in Siberia, and the other in North America; and Plana, an eminent Italian geometer, calculating the distribution of solar heat on the surface of the earth, demonstrated that, starting from the polar circle, the mean temperature will increase up to the Pole. Lambert, in investigating the laws by which insolation, or the quantity of heat furnished by the sun will vary from one place to another at different times of the year, has ascertained that at the moment of the solstice, 21st June, the North Pole will receive in twenty-four hours an amount of heat greater by one-fifth than that which a point under the Tropic of Cancer re-

ceives at the same time. During the months in which the sun is above the horizon in the Arctic region, there is a great accumulation of heat; and it is easy to conceive that towards the middle of summer, the polar temperature can reach to a degree more than sufficient to produce the more or less complete fusion of the ice formed during the long winter night.

The probability of there being an open sea around or near the North Pole is increased by the currents which arctic navigators have met with. A striking example of the force of some of these currents was shown in the drift of the ship *Resolute*, which was found in Davis' Strait in 1865, a thousand miles from the point in the north where Kellett abandoned her in May, 1854. There is a very strong current in Behring's Straits, which flows along the coast of Asia, alternating from the south to the north, and from the north to the south. The third current descends from the north to the south, between Spitzbergen and Nova Zembla. It is this current which in 1827, carried away the *floe* under Parry, and prevented him, notwithstanding his wonderful efforts, from going beyond 82 degrees north latitude. All these currents seem to proceed directly from a vast reservoir of sea surrounding the North Pole. The choice of Behring's Straits for a passage in this direction is justified by the recent experience and observations of Captain Long, command of the American whaler *Nile*, who entered the Polar Sea, and was able, without meeting any serious obstacles, to approach within thirty miles of the point where Wrangel had perceived a sheet of free water in the month of March, 1823. Captain Long concludes from his advice as to the best route to be taken, telling us "that the passage from the Pacific to the Atlantic will be accomplished by one of the routes indicated above, I believe as firmly as one can believe in an event to come."—*Ledger.*

"I Don't Care."—Yes, you do, too, and there's no use trying to deceive yourself with the sophistry of those words. The best, noblest, truest and most generous part of your nature does care for the unkind, cutting words you have uttered to one that you loved, in a moment of pique. You may carry your pride ever so proudly and elegantly, you may never drop by look or word the sweet dew of kindness on the wound you have made, in a nation as proud, as sensitive and exacting as yourself; but to your honor, be it said, you are better than your words, and away down your heart lurk shame and repentance and sorrow for them. You may carefully hide them both, and in a little while they will be gone; for oh! it is very easy to make oneself bitter and proud and cold—very hard to keep one's self sweet and mellow and charitable; but there must be some pain and some struggling, before you can do a mean, ungenerous thing to one who loves you, and have your heart endorse your "I don't care."

I have often remembered a farewell discourse expressed on behalf of a dear aged Friend, Christiana Whiting, by the dear pious Indian, Peter Jones, (who is mentioned in *Thos. Shillitoe's Journal*), when he was over his viz., "May the Great good Spirit talk with thee in thy heart every day."—*L. A. Barclay.*

Communicated for "The Friend."

M. E. SHEARMAN: Dear friend. I write that through the columns of "The Friend," and the "Freedmen's Friend," a knowledge of the chief difficulty in the way of my schools may be brought to the attention of our kind and liberal friends in Philadelphia and elsewhere.

The children are very much in need of shoes, and large numbers are prevented from attending school, on this account. Some are half-naked, and most without anything like comfortable clothing to wear.

If it is not understood how, with a plentiful crop, the colored people are thus left destitute of means to buy clothing, I would explain the matter thus:

1st. Corn is worth, on an annual average, \$1.25 in the spring, and only fifty cents in the fall.

2d. The colored man comes to the farm, to work on the shares, in first month, empty-handed, and by the time his crop is made, he is in debt to his employer for all the corn he has bought of him, while making it, at \$1.25, and must pay it in corn, at only fifty cents; i. e. give two bushels and a half for every one bushel that he owes.

3d. Now suppose eight hands make 400 bushels in all. Again, suppose they have borrowed 100 bushels of their employer, to feed themselves and his horses. Well, when his third comes out, they have 266 $\frac{2}{3}$ bushels, and were it not for debt, they could live well. But lo! out of this 266 $\frac{2}{3}$ bushels must come 200 for what they owe, leaving 66 $\frac{2}{3}$ bushels, being seven or eight bushels apiece, which will not feed them and his horses till "Christmas." I have put down the figures at a low estimate. In the majority of cases it is even worse than this.*

I speak, not from hearsay, but from actual experience and personal observation.

Thy sincere friend,

EDWARD PAYSON HALL.

Salisbury, N. C., 12th mo. 3, 1868.

Communicated for "The Friend."

Danville, 12th mo. 20th, 1868.

M. E. SHEARMAN: Esteemed Friend. * * * The clothing thou sent has nearly been disposed of, and thankfully received. If we could have childrens' shoes and cast-off clothing, they would be very acceptable. Many poor children are kept from school not having a decent garment to put on. I pity them much,—they are ashamed to go with their rags. Those who come to school across the Oan river are, many of them, very poor, and have to pay five cents toll each way. I spent one afternoon among these poor creatures last week, and found that one cause of their absence from school was the entire lack of means to pay these rates. * * *

Signed, ALFRED H. JONES.

Lest the Ancient Standard should be lowered.—It is well there are a few left, who are jealous lest the ancient standard should be lowered by unskilful meddlers in things too high for them. Oh! how tried my poor mind is under a sense of a want amongst us of true discernment; and even in my very secluded allotment here, I think my inward eye sees a

* We think there must be some mistake in this calculation, as 400 bushels would be a small part of what eight men could raise.

covering in our Society that is prohibited in the Truth. A mixture as surely disapproved in the sight of the Great Head of the Church, as ever the forbidden "linsey woolsey garment" was of old, and which must one day be taken off, for the all-scrutinizing eye will not wink thereat.—*Sarah Lynes Grubb.*

Steele's "Fourteen Weeks in Chemistry," says: "The truth that animal matter passes from the animal back to the vegetable, and from the vegetable to the animal kingdom again, received a curious illustration not long since.

"For the purpose of erecting a suitable monument in memory of Roger Williams, the founder of Rhode Island, his private burying ground was searched for the graves of himself and wife. It was found that everything had passed into oblivion. The shape of the coffins could only be traced by a black line of carbonaceous matter. The rusting hinges and nails, and a round wooden knot, alone remained in one grave; while a single lock of braided hair was found in the other. Near the grave stood an apple tree. This had sent down two main roots into the very presence of the confined dead. The larger root, pushing its way to the precise spot occupied by the skull of Roger Williams, had made a turn as if passing around it, and followed the direction of the backbone to the hips. Here it divided into two branches, sending one along each leg to the heels, when both turned upward to the toes. One of these roots formed a slight crook at the knee, which made the whole bear a striking resemblance to the human form. There were the graves, but their occupants had disappeared; the bones even had vanished. There stood the thief—the guilty apple tree—caught in the very act of robbery. The spoliation was complete. The organic matter, the flesh, the bones of Roger Williams, had passed into an apple tree. The elements had been absorbed by the roots, transmuted into woody fibre, which could now be burned as fuel or carved into ornaments, and bloomed into fragrant blossoms, which delighted the eye of the passer by, and scattered the sweetest perfume of spring; more than that—has been converted into luscious fruit, which, from year to year, had been gathered and eaten."

Solar Engines.—It is announced that Captain John Ericsson, of Monitor fame, has discovered a method of utilizing the sun's rays so as to employ them as a motive power. At the late centennial anniversary of the Swedish University of Lund, Captain Ericsson made a communication that, as a result of his experiments, he was able to construct three "solar engines," of which the first was driven by steam formed by the concentration of the heat of the solar rays, and the other two by the expansion of atmospheric air, heated directly by concentrated radiant heat. He stated that, such is the enormous development of solar heat, that an area of ten feet square on the sun's surface will drive a real steam engine of 45,984 horse-power, demanding a consumption of more than 100,000 pounds of coal every hour. Captain Ericsson's experiments, it is alleged, show that the concentration of solar heat on ten feet square (or 100 feet of surface,) develops a power exceeding one horse-power. The exact nature of the concentrating mechanism invented by Eric-

son is not made public, but so thoroughly convinced of its practicability is Mr. Delamater, the proprietor of the well-known Delamater iron works, that he declares, in a late scientific publication, that "before the termination of the present season, bread will be prepared from flour ground by the power of the solar engine."

It is best not to be angry; and best in the next place, to be *quickly reconciled.*

THE FRIEND.

FIRST MONTH 2, 1869.

"Memorials concerning Deceased Friends, Members of Ohio Yearly Meeting, 1868."

We have received a handsomely printed duodecimo, of 114 pages, with the above title. It embraces twenty memorials issued by Ohio Yearly Meeting, between the years 1819 and 1866, inclusive. Some of the Friends concerning whom these testimonies have been given forth by the church, were well known throughout the Society in this land, having travelled extensively in their Master's service, as Catlit Jones, Jonathan Taylor, William Flanner, John and Abner Heald; while others were less conspicuous or more circumscribed in the field of their labors. But each and all of them are added to the cloud of witnesses to the fullness of that redemption which is in Christ Jesus, and the sufficiency of that measure of divine grace purchased by Him for lost man, to bring salvation to the soul, and that it ever leads its obedient followers to take up the daily cross and walk in the strait and narrow way of holiness.

There is much encouragement to be derived from the experience and example of those who "having obtained a good report through faith," have, to the close of life, given practical evidence that they have not "followed cunningly devised fables," but have found the gospel plan of salvation a blessed reality, and the Lord's power sufficient to bear them above every trial and temptation, and present in every needful time, to administer strength to triumph over the infirmities of the flesh, and to perform the duty He assigned to them. Even their many fears and doubts, their oft repeated sense of utter unworthiness and unprofitableness as servants of so good a Master, are instructive, and should convey to those struggling under similar feelings, the animating assurance, that these are part of the afflictions which are dispensed in love, and, if rightly endured, will yield the peaceable fruits of righteousness.

While thus speaking of our high estimate of the examples of holiness as exhibited in the consistent lives of dedicated servants of Christ, we embrace the opportunity for expressing a doubt we have long entertained of the propriety of the expression often annexed to memorials of departed worthies, that those who read or hear them may be stimulated to follow them as they *endeavored* to follow Christ. The apostle said to those he was addressing, "Be ye followers of me, even as I also am of Christ," circumscribing his example to his perfect obedience to his Master. But how few have, in all their *endeavors*, come up in that full obedience which is commanded. How few but who, even when the spirit was

willing, have flagged at times in performance of known duty. How few but who, at times, have shown that they felt the yoke of Christ any thing but easy, and his burden far from being light! And though these weaknesses were mercifully forgiven, and it may be finally removed by Him who "knoweth our frame, and remembereth that we are dust;" yet those in whom they occur—and to whom have they not sometimes occurred—fall short in many of their efforts, of that perfect example which the christian is called to imitate.

Our blessed Saviour, who commanded his disciples, "Be ye therefore perfect even as your Father which is in heaven is perfect," on the memorable occasion when He condescended to wash his disciples' feet, said to them, "I have given you an example, that ye should do as I have done to you." The obligation to follow his example, we conceive, was not confined to that act of humility and love, but applies to all the virtues and graces which shone pre-eminently in him, as a perfect man, "holy, harmless, undefiled, separate from sinners." The Apostle Peter, in holding up the example which believers should follow, refers them to infinite purity. "But as He which hath called you is holy, so be ye holy in all manner of conversation." And again, "Because also Christ suffered for us, leaving us an example that ye should follow his steps."

Thus although we cannot, in any wise, place ourselves on an equality with Him, "in whom dwelt all the fulness of the godhead bodily," yet as He took on himself the seed of Abraham, and was made like unto his brethren, there were united in him, the perfections of Deity with the infirmities of humanity, and as a man He was made a perfect example, through suffering and sorrow, through temptation and the severest trials to which we are exposed, sin only excepted. While, therefore, it is the duty of every member of the true church to be "examples to the flock," we apprehend it is falling far below the standard held up in Holy Scripture, when christians are advised to take for their example the "endeavors" of any servant to follow Christ.

SUMMARY OF EVENTS.

FOREIGN.—Later advices from Rio Janeiro report that the allied forces had attacked the fortified position of the Paraguayans at Villeta, but had been repulsed with a loss of fifteen hundred killed and wounded. The Paraguayan stronghold was subsequently attacked by the Brazilian iron-clads, but without success. It is said that President Sarmiento, of the Argentine Republic, has engaged the kind offices of the American Minister to Paraguay, for an attempt to mediate with Lopez, and that the Brazilian government has, in consequence, threatened to withdraw its envoy from the Argentine Republic.

Advices from Mexico state that 2000 laborers were engaged in constructing the Vera Cruz railroad. The formation of New Leon into a separate State had been conceded by Congress, and the question of forming the new State of Hidalgo was under discussion. A project of amnesty had been presented in Congress, and was under discussion. The journals generally advocate clemency. The exploration of new and abandoned mines was reviving.

The quarrel between Turkey and Greece is still unsettled. The Porte has extended the time for the departure of the Greeks from the Turkish dominions, to five weeks. The Turkish government has placed ships of war on the coast of Cerigo to prevent the departure of Greek volunteers from that island for Crete. It is not yet quite certain that a Conference of the Great Powers will be held. Turkey declines to yield the independence of Crete, to transfer the island to Egypt, to sell it, or to yield to any other of the bases of compromise.

The recent eruption of Mount Etna rapidly subsided, and the volcano has shown but little activity during the past two weeks.

In Madrid the elections for the Cortes passed off with but slight disturbances of public order. All the monarchical candidates were elected. The Republicans carried Seville and Barcelona. The Duke of Monpensier has published a manifesto announcing his liberal views. The *Imparcial* suggests the nomination of the son of the Duke of Monpensier for king, under a regency. The semi-official journals say that Spain will not even consider the subject of the sale of Cuba to the United States. More troops have left Spain for Cuba.

Two Egyptian mail steamers recently came into collision in the Gulf of Smyrna. A fearful loss of life was the result, over 200 passengers having, it is said, been killed by the shock.

The London press is unanimous in condemnation of President Johnson's message to Congress. The *Times* says, "The people of both England and America are uneasy in regard to the relations which are to exist in future between the two nations. This uneasiness arises from ignorance of the true state of the negotiations now pending on the Alabama question." The *Times* believes that Secretary Seward himself obstructs the settlement, but trusts that the question will be finally and amicably adjusted under the incoming administration of President Grant.

According to an agreement just concluded between the Prussian and English governments, postage from and to northern Germany will be reduced to threepence. Post-office orders will also be introduced.

The London *Times* and *Standard* of the 28th, have editorials on the subject of the proposed conference to settle the questions at issue between Turkey and Greece. Both journals condemn the project as useless.

The Greeks are fleeing from Turkey on account of the threatened war. Some of the fugitives have been received in Roumania, on condition of their observing strict neutrality. The Sultan of Turkey will agree to the proposed conference, but only on his own terms. He will not allow the internal affairs of Turkey to be touched, nor will he allow the terms offered in his ultimatum to Greece regarding Crete to be varied.

A Madrid dispatch of the 27th says, that the government is taking measures to reduce the expenses for the ensuing year. Castelar, the well known republican, says that a republic has been morally formed already in Spain, as the Republican party carried all the great cities in the country, except Madrid, in the late elections.

London.—Consols, 92½. U. S. 5-20's, 74½.

Liverpool.—Cotton quiet; sales of about 12,000 bales. California wheat, 11s. 10d.; red western, 9s. 10d. per 100 lbs.

UNITED STATES.—A General Amnesty.—On the 25th ult. the President issued a proclamation announcing full pardon and amnesty to all who had taken part in the late rebellion. It is general in its terms, and will include Jefferson Davis and the other rebel leaders. After referring to his previous action and the several proclamations which, from time to time had been issued, the President says: Now, therefore, be it known that I, Andrew Johnson, President of the United States, by virtue of the power and authority in me vested by the Constitution, and in the name of the sovereign people of the United States, do hereby proclaim and declare, unconditionally and without reservation, to all and to every person who directly or indirectly, participated in the late insurrection or rebellion, a full pardon and amnesty for the offence of treason against the United States, or of adhering to their enemies during the late civil war, with restoration of all rights, privileges and immunities under the Constitution and the laws which have been made in pursuance thereof.

In testimony whereof, I have signed these presents with my hand, and have caused the seal of the United States to be hereunto affixed.

Philadelphia.—Mortality last week, 186.

St. Louis.—The recent census of St. Louis county gives a population of 241,071; an increase, since 1864, of 53,251.

Miscellaneous.—On the 27th ult., a fire broke out in Lynn, Mass., destroying several blocks of buildings, with much valuable property.

A Salt Lake telegram says, the Central Pacific Railroad reached a point 471 miles east of Sacramento, Cal., on the 27th ult.

San Francisco has forty-eight newspapers and periodicals, not including the weekly editions of the daily papers.

The opium trade of Calcutta for the past year, has amounted to £7,000,000.

The total amount of U. S. bonds thus far issued in

aid of the Union Pacific Railroad, amounts to \$48,810,000, of which the Union Pacific has received \$23,500,000.

Some of the statistics of the English railway system are truly astonishing. At the present time, 3600 trains run in and out of London daily, carrying on an average 300,000 passengers. When the mackerel fishery is at height, special trains come in laden with the fish at the rate of 90 tons a day for a month. There are at present 13,854 miles of railroads open for traffic in Great Britain. They employ 177,000 men, of whom 40,000 are artificers, 26,000 porters and signalmen, 6000 guards and brakemen, and 11,000 engine drivers and firemen. The annual loss of iron by wear and tear on these 13,854 miles of track amounts to about 20,000 tons, while a 250,000 have to be taken up, rerolled and relaid.

The Markets, &c.—The following were the quotations on the 28th ult. *New York*.—American gold, 130½. Silver, 130½. U. S. sixes, 1881, 114½; ditto, 5-20's, 110½; ditto, 10-40, 5 per cents, 105½. Superfine State flour, \$6 a \$6.40; extra State, \$7.00 a \$7.40; shipping Ohio, \$7 a \$7.30; family and fancy brands, \$10 a \$14.50. No. 1 Chicago spring wheat, \$1.70; and California, \$2.20. Barley, \$2.15. Western oats, 76½ cts. New western corn, 93 a 97 cts.; old, \$1.08 a \$1.09. Yellow corn, \$1.03 a \$1.07. Middling uplands cotton, 25½ cts.; Orleans and Texas, 25½ a 26 cts. Carolina rice, 8½ a 9½ cts. Cuba sugar, 11½ a 11½; hard refined, 15½ cts. *Philadelphia*.—Superfine flour, \$5 a \$5.50. Extras, \$6 a \$6.50; western extra, \$7.25 a \$8.12; family and fancy, \$9 a \$13. Red wheat, \$1.90 a \$2.00. Amber, \$2.10 a \$2.12. Rye, \$1.60. Old yellow corn, \$1.10; new, 80 a 90 cts.; new white, 85 a 87 cts. Western oats, 74 a 75 cts. Clover-seed, \$8 a \$8. Timothy, \$2.75 a \$2.80. Flaxseed, \$2.60. The arrivals and sales of beef cattle at the Avenue Drove-yard were light, reaching only 1100 head. Extra sold at 10 a 11 cts.; fair to good, 8 a 9 cts.; and common 6 a 7 cts. lb. gross. About 4000 hogs were sold at \$13.50 a \$12.50 per 100 lbs. net. Of sheep 6000 sold at 4½ a 5 cts. per lb. gross. *Baltimore*.—No sales of wheat. Rye, \$1.45 a \$1.55. Yellow corn, 87 a 88 cts.; white, 87 a 88 cts. Oats, 63 a 68 cts. *Chicago*.—No. 1 wheat, \$1 a \$1.22; No. 2, \$1.11½. No. 1 corn, 65 cts.; No. 2, 58 cts. Oats, 46½ cts. *St. Louis*.—Fall wheat, prior to choice, \$1.56 a \$2; fancy, \$2.15; No. 1 spring, \$1. No. 2, \$1.15. Corn, 63 a 65 cts. Oats, 54 a 55 cts. Barley, \$1.55 a \$2. *Cincinnati*.—No. 1 wheat, \$1. Corn, 70 cts.; in the ear, 67 a 68 cts. Oats, 60 a 63 cts. *San Francisco*.—(Gold prices)—Flour, \$4.75 a \$5. Wheat, \$1.70 a \$1.80. Legal tenders, 74½.

WESTTOWN BOARDING SCHOOL.

A Stated Meeting of the Committee having charge of the Boarding School at Westtown, will be held in Philadelphia on Sixth-day, the 8th of First month, 1869, at 10 o'clock, p. m.

The Committee on Instruction and that on Admissions meet in the city, on the morning of the same day at 10 o'clock.

SAMUEL MORRIS,

Twelfth month 29th, 1868.

Clerk.

WESTTOWN BOARDING SCHOOL.

Wanted, a Nurse, in the Girl's Department. Apply early to

Anna V. Edge, Downingtown, Chester Co., Pa.

Susanna F. Sharpless, Birmingham, do. do.

Elizabeth R. Evans, No. 323 Union St., Phila.

Sarah A. Richie, No. 444 N. Fifth St., Phila.

FRIENDS' ASYLUM FOR THE INSANE.

NEAR FRANKFORD, (TWENTY-THIRD WARD, PHILADELPHIA) Physician and Superintendent—JOSHUA H. WORTHINGTON, M. D.

Application for the Admission of Patients may be made to the Superintendent, to CHARLES ELLIS, Clerk of the Board of Managers, No. 1000 Market Street Philadelphia, or to any other Member of the Board.

DIED, in Smyrna, N. Y., the 17th of 12th mo. 1868, SUSAN, wife of Henry Knowles, aged 82 years, a beloved member and elder of Smyrna Monthly and Particular Meeting. Having endured much physical suffering the last few years, death was to her a welcome messenger. A short time before the close, she said she was nothing in her way, and felt that a mansion was prepared for her; her end was quiet and peaceful.

WILLIAM H. PILE, PRINTER,
No. 422 Walnut street.